CONTENTS

NUMBER 1

N. Mashaya	1	Influence of ambient temperature and relative humidity on changes in numbers of a natural population of *Liposcelis entomophila* (Enderlein) (Psocoptera: Liposcelididae)
Frank H. Arthur	13	Immediate and delayed mortality of *Oryzaephilus surinamensis* (L.) exposed on wheat treated with diatomaceous earth: effects of temperature, relative humidity, and exposure interval
Rainer Reuss and Stephen Pratt	23	Accumulation of carbon monoxide and carbon dioxide in stored canola
Joanne Willcock and Naresh Magan	35	Impact of environmental factors on fungal respiration and dry matter losses in wheat straw
F. A. Ajayi and N. E. S. Lale	47	Susceptibility of unprotected seeds and seeds of local bambara groundnut cultivars protected with insecticidal essential oils to infestation by *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae)
N. E. S. Lale and B. A. Yusuf	63	Potential of varietal resistance and *Piper guineense* seed oil to control infestation of stored millet seeds and processed products by *Tribolium castaneum* (Herbst)
G. Dal Bello, S. Padin, C. López Lastra and M. Fabrizio	77	Laboratory evaluation of chemical-biological control of the rice weevil (*Sitophilus oryzae* L.) in stored grains
Ebenezer O. Owusu	85	Effect of some Ghanaian plant components on control of two stored-product insect pests of cereals
Ismael Sánchez-Ramos and Pedro Castañera	93	Acaricidal activity of natural monoterpenes on *Tyrophagus putrescentiae* (Schrank), a mite of stored food

NUMBER 2

H. Bouda, L. A. Tapondjou, D. A. Fontem and M. Y. D. Gumedzoe	103	Effect of essential oils from leaves of *Ageratum conyzoides, Lantana camara and Chromolaena odorata* on the mortality of *Sitophilus zeamais* (Coleoptera, Curculionidae)
Naheed Ali and Bryan Turner	111	Allozyme polymorphism and variability in permethrin tolerance in British populations of the parthenogentic stored product pest *Liposcelis bostrychophila* (Liposcelididae, Psocoptera)
N. Raja, S. Albert, S. Ignacimuthu and S. Dorn	127	Effect of plant volatile oils in protecting stored cowpea *Vigna unguiculata* (L.) Walpers against *Callosobruchus maculatus* (F.) (Coleoptera: Bruchidae) infestation
Somchart Soponronnarit, Thanit Swasdisevi, Somboon Wetchacama and Wivat Wutiwiwatchai	133	Fluidised bed drying of soybeans
I. Mewis and Ch. Ulrichs	153	Action of amorphous diatomaceous earth against different stages of the stored product pests *Tribolium confusum, Tenebrio molitor, Sitophilus granarius* and *Plodia interpunctella*

Canchun Jia, Da-Wen Sun and Chongwen Cao 165 Computer simulation of temperature changes in a wheat storage bin

P. W. Flinn and D. W. Hagstrum 179 Augmentative releases of parasitoid wasps in stored wheat reduces insect fragments in flour

Nancy D. Epsky and Dennis Shuman 187 Laboratory evaluation of an improved electronic grain probe insect counter

Irshad A. K. Afridi, Zahida Parveen and S. Zafar Masud 199 Stability of organophosphate and pyrethroid pesticides on wheat in storage

I Announcement

NUMBER 3

M. A. Basunia and T. Abe 205 Moisture desorption isotherms of medium-grain rough rice

David W. Hagstrum 221 Immigration of insects into bins storing newly harvested wheat on 12 Kansas farms

Michael A. Mullen and Alan K. Dowdy 231 A pheromone-baited trap for monitoring the Indian meal moth, *Plodia interpunctella* (Hübner) (Lepidoptera: Pyralidae)

Arnon Shani and John Clearwater 237 Evasion of mating disruption in *Ephestia cautella* (Walker) by increased pheromone production relative to that of undisrupted populations

M. O. Ashamo and O. O. Odeyemi 253 Effect of rearing temperature on the fecundity and development of *Euzopherodes vapidella* Mann (Lepidoptera: Pyralidae), a pest of stored yam

Johannes L. M. Steidle, David Rees and E. Jane Wright 263 Assessment of Australian *Trichogramma* species (Hymenoptera: Trichogrammatidae) as control agents of stored product moths

Richard Morton, John G. Brayan, James M. Desmarchelier, Sergio Dilli, Paul R. Haddad and Gerard J. Sharp 277 Statistical analysis of decay of organophosphorus and pyrethroid insecticides and carbaryl on paddy rice, maize, sunflowers and field peas

Irene Gudrups, Sian Floyd, Jennifer G. Kling, Nilsa A. Bosque-Perez and J. E. Orchard 287 A comparison of two methods of assessment of maize varietal resistance to the maize weevil, *Sitophilus zeamais* Motschulsky, and the influence of kernel hardness and size on susceptibility

C. Karunakaran, W. E. Muir, D. S. Jayas, N. D. G. White and D. Abramson 303 Safe storage time of high moisture wheat

NUMBER 4

S. Ekesi, E. A. Egwurube, A. D. Akpa and I. Onu 313 Laboratory evaluation of the entomopathogenic fungus, *Metarhizium anisopliae* for the control of the groundnut bruchid, *Caryedon serratus* on groundnut

Manoj K. Nayak and Patrick J. Collins 323 An improved method for mass rearing of three liposcelid psocids (Psocoptera: Liposcelidae) infesting stored commodities

N. E. S. Lale and S. Vidal 329 Intraspecific and interspecific competition in *Callosobruchus maculatus* (F.) and *Callosobruchus subinnotatus* (Pic) on stored bambara groundnut, *Vigna subterranea* (L.) Verdcourt

Sékou Moussa Kéita, Charles Vincent, Jean-Pierre Schmit, John Thor Arnason and André Bélanger 339 Efficacy of essential oil of *Ocimum basilicum* L. and *O. gratissimum* L. applied as an insecticidal fumigant and powder to control *Callosobruchus maculatus* (Fab.) [Coleoptera: Bruchidae]

S. Rajendran and N. Muralidharan 351 Performance of phosphine in fumigation of bagged paddy rice in indoor and outdoor stores

P. G. Fields, Y. S. Xie and X. Hou 359 Repellent effect of pea (*Pisum sativum*) fractions against stored-product insects

Stephen A. Kells, Linda J. Mason, Dirk E. Maier and Charles P. Woloshuk 371 Efficacy and fumigation characteristics of ozone in stored maize

G. L. Weller and R. Morton 383 Fumigation with carbonyl sulfide: a model for the interaction of concentration, time and temperature

399 Erratum

400 Announcement